

***Ptilotus tetrandrus* Benl sp. nov. (Amaranthaceae)**

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Abstract

A new species of *Ptilotus*, *P. tetrandrus* Benl, is described from Western Australia. The type specimen is illustrated and the resemblance to other taxa is discussed.

***Ptilotus tetrandrus* Benl sp. nov. (Figures 1 and 2)**

Diagnosis. Ab omnibus *Ptilotis* adhuc notis staminibus regulariter 4 fertilibus diversus; staminodio uno minimo, pseudostaminodiis nullis.

Distinguished from all previously known species of *Ptilotus* by having 4 stamens: staminodium 1, very small; pseudostaminodia none.

Descriptio. *Herba annua* tenera. *Caules* in speciminibus examinatis singuli, sordidi-virides, 17–28cm longi (inflorescentia interrupta inclusa) et 1·2–2mm diametro, graciles, erecti vel curvati-erecti, angulati-striatuli, partim sulcati, basim versus lignescentes; juveniles puberuli, pilis albidis subrectis vel crispis, nodosi- sive denticulati-articulatis (partim brevissime verticillati-ramosis), 0·5–1·2mm longis; adulti leviter induti, pubescentia tandem ad partes superiores et in axillis foliorum restricta; primo indivisi vel pauciramiosi, ramis lateralibus erectis ad 15cm longis (spica inclusa), postea nonnullis pedunculis brevibus floriferis villosis ex axillis orientibus. *Caules* et rami in pedunculum et rhachidem villosam spicarum transientes; in speciminibus exstantibus parce foliati.

Folia alterna 1·3 ad ca 5cm distantia, plus minusve decurrentia, laminis integris basi petioli-formi gradatim in petiolum indistinctum ad 1cm longum attenuatis, oblongi-lanceolatis vel elongati-ellipticis, ad 3·5:0·4cm longis latisque, obscure viridibus, in apice acutis brevissime mucronatis (mucrone 0·2–0·4mm) nervo medio fuscescente subius vix prominente; summa in bracteis quasi transeuntia. Ex axillis ramuli floriferi dense villosi haud raro oriri solent.

Inflorescentiae elongati-spicatae; spicae singulae terminales haud spectabiles primo rubiginosae dein pallide viriduli-stramineae ad 10–15cm et ultra longae et 0·8cm diametro, apice excepto remotiflorae (Fig. 1A). *Rhachis* villosa eadem longitudine, pilis (sicut in caulibus) inter flores conspicuae induta.

Flores ca 20 ad 40, superiores densius conferti, inferiores paulum majores dissiti usque ad 1·4cm (raro longius) distantes. *Bractea bracteolaeque* scariosae, nitidae, glaberrimae, inaequiformes: *Bractea* (Fig. 1B) rigidiuscula, ovati-lanceolata, 3–3·8mm longa et 1·6–2·2mm lata, dilute succinea, costam et basim versus (atri-)fusca, acuminata, integerrima. *Bracteolae* (Fig. 1C) cordati-orbiculares ventricosae, breviores (2–2·6mm) at latiores (2–2·8mm), incoloratae hyalinae, apicem obtusatum versus minute sed distincte erosi-denticulatae, vix apiculatae.

Perianthium (rigidi-)erectum, tepalis divergentibus campanulati-patens, basi constricta indurata in tubum angustum brevem (1·1–1·5mm) -extus pilis strictis dense obtectum-coalitum.

Tepala ± distincte trinervia (Fig. 1D) -nervis lateralibus haud totam areolam medianam impellucidam includentibus-, bicolorata; primo subaequaliter rufescentia, dein areolis incrassatis viridi-flavescentibus (tandem olivacei-brunneis) et marginibus limbatis (basi excepta) membranaceis nitentibus demum incoloratis; marginibus inferne pilis subrectis (numquam crispis) obsessis, superne in apicem nudum integrum acutiusculum haud raro incisum (visu emarginatum) transeuntibus. *Tepala* intus glaberrima, extus pilosa, pilis niveis rigidis (denticulati-)nodosis ad 2mm longis, praecipue dimidio inferiori areolae orientibus, apicem haud attingentibus, subaequiformia: 2 exteriora elongati-linearia 4·5x0·8–1·0mm, in floribus imis solitariis ca 6·5x1·2mm; 3 interiora (Fig. 1D) subelliptica 3·5–4·2x1mm, in floribus imis solitariis ca 5·5x1·3mm.

Stamina 4 (Fig. 1E) fertilia aequalia, uno abortivo ad lacinulam minimam reducto; basi in cupulam vix 0·8mm altam tubo perianthii arcte insidentem connata, anulo libero parvo 0·2–0·25mm alto, glaberrimo vel extus minute fimbriato, in margine minutissime eroso, ciliolato; squamulis intrastamineis nullis.

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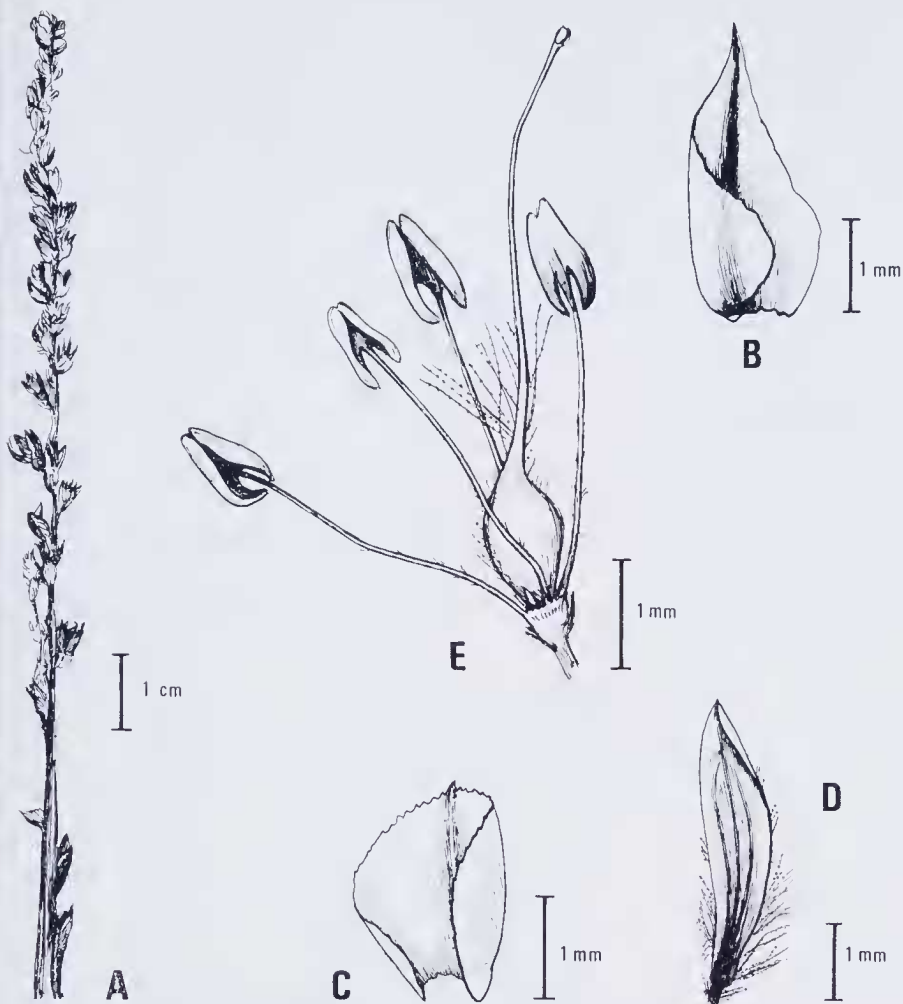


Figure 1. *Ptilotus tetrandrus* Benl. A—Terminal portion of plant, B—Bract, inner face, C—Bracteole, inner face, D—Inner tepal, inner view, E—Androecium and gynoecium.

Filamenta angusti-taeniata 1.5–2.8 mm longa, per totam longitudinem aequalata (ca 0.1 mm), supra cupulam haud dilatata; juvenilia usque ad antheras pilosa, demum (sub)glabra.

Antherae fulvae longi-ellipsoideae ca 0.8 mm longae et 0.3 mm latae, basi bilobae.

Ovarium (Fig. 1E) asymmetricum primo complanati-subclavatum dein subglobosum, ad 1.6 (in inis floribus 2.2) mm longum, ad 0.9 mm latum, haud stipitatum; in dimidio superiore bilateraliter pilis rectis minimis vel ad 1 mm longis obsessum. *Stylus* modice excentricus juvenilis curvatus postea (sub)erectus, ad 3.5 mm longus; pubescentia ovarii in stylum transiens. *Stigma* inconspicuum.

Holotype of species: Near Carslakes Well, Glenorn Station, Western Australia; R. B. Hacker no 97, 2 Oct. 1974—PERTH.

Habitat. The species was among “profuse annual flora which established following the 1968–73 drought”, in loamy sand in mulga (*Acacia aneura*).

Material. The description is from the holotype (Fig. 2), a sheet containing six stems with mature spikes, but devoid of stem-bases.



Figure 2. *Pilotus tetrandrus* Benl. Holotype sheet.
 Coll. R. B. Hacker No. 97, 2 October, 1974, near Carlsakes Well, Glenorn Station, Western
 Australia. PERTH. (new data supplied by Mr. Hacker after the photograph was taken)

Discussion. There are only a few species within the genus with an inflorescence consisting of conspicuously remote flowers. Interrupted spikes are known so far in

(a) *P. dissitiflorus* (F. Muell.) F. Muell., in which 10–15 solitary flowers form a spike up to 15cm long and 4cm broad, terminating the branches. Tepals will attain lengths of about 2cm; in both var. *dissitiflorus* and var. *longifolius* Benl., crisped woolly hairs occur inside the inner tepals. The species is known from N.T. and Qld., respectively.

(b) *P. remotiflorus* Benl from Queensland, a much-branched undershrub (ca 30cm in height) with tiny leaves. The tepals are up to 11mm in length, the inner ones again with a woolly beard. This species is unique for its peculiar pubescence in the vegetative parts, consisting of various kinds of trichomes (see Mitt. Bot. München 12:337, Fig. a, 1976).

(c) *P. distans* (R.Br.) Poiret, another perennial with very narrow-linear leaves. Here the tepals (up to 1.5cm long) do not form a tube at their base but are free, and the filaments are united below to a free staminal cup with a fringed margin. There is some faint resemblance of *P. distans* (from W.A., N.T., Qld., N.S.W.) to the new western species as to the glabrous bracts and bracteoles, to the hairless inner side of the tepals, to the pilose juvenile filaments etc. However, apart from the differences just indicated, *P. tetrandrus* is characterized by its number of stamens being constantly four, a significant feature not observed in the genus until now and readily distinguishing the present taxon from any previously described species, thus requiring special recognition.